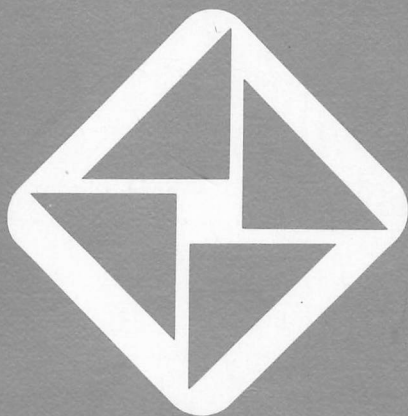


Institute of Computer Management



Catalog 1978-80
Volume 26

Institute of Computer Management

Mailing Address: Diamond Shamrock Building
1100 Superior Avenue
Cleveland, OH 44114
Telephone: (216) 241-3964

Entrance inquiries should be addressed to the Director of Admissions.

Visitors:

The Institute of Computer Management welcomes visitors. A tour of the school and a personal interview can be arranged by calling (216) 241-3964.

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- **Applied Computer Programming
with Business Procedures**
- **Key punch**
- **Computer Management**
- **Computer Programming**

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Director's Message

We are living in one of the most exciting and explosive times in man's history — a time of space exploration and moon landings, the wide use of new math and wonder drugs, a world of mass transportation and demanding businesses and government, and a time of the computer revolution.

All are characteristic of our modern day society and this ever increasing complexity is evidenced by the growing need for qualified and well-trained personnel in all areas of business.

This crucial need for talented young people can only be fulfilled through education and training. This education can take the form of the college graduate who has just earned his degree in Chemical Engineering and who applies that knowledge to find new methods of pollution control, or in the form of the professional business manager who makes critical financial decisions based on the output of the computer, or in the form of the skilled auto mechanic who builds a new transmission for your family automobile.

The key ingredient in all of these examples is education — education which can be gained in many ways.

There is a tremendous challenge awaiting those of you who wish to enter the many diverse fields of business, and the opportunities that can be achieved are a function of your ability to apply your education and training.

The Institute of Computer Management offers several career programs in computers, business and related areas of study.

Our primary goal is meaningful and practical training for our students so that they can fill the real needs of the business world.

Your own goal may be one of personal accomplishment, happiness, and success.

If so, perhaps ICM can become a part of your world and by working together we may be able to improve tomorrow's.

Sincerely,

A handwritten signature in dark ink, reading "Robert P. Gioella". The script is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Robert P. Gioella
Director of Education

An Introduction to the Institute of Computer Management

History:

The Institute of Computer Management is a private, non-denominational, co-educational business school founded in Pittsburgh, Pennsylvania, in June of 1963.

In November of 1964, ICM expanded into Cleveland, Ohio. Both schools are operated by the same management and offer the same basic curricula. On March 23, 1966, The Institute of Computer Management became the educational division of Litton Industries of Beverly Hills, California.

Litton Industries is one of the major corporations in the country. It is a complex of companies that deals in products from electronic business equipment to microwave ovens. But, basically Litton is known for its computers and data collections systems. As a division of Litton Industries, ICM has access to a reservoir of technical talent, resources, and experience. As a result, the ICM staff, curricula, and equipment are geared to today's business and data processing requirements. The school, since its inception, has been an innovator in the field of computer education and related data processing courses. Through revision, innovations, and new course development, using the latest computer equipment, ICM has established itself as one of the most progressive schools of its kind in total business education.

Philosophy:

The Institute of Computer Management is dedicated to one purpose: quality education for men and women seeking a place in the business community. It is toward this purpose that every aspect of the Institute of Computer Management is designed.

The educational experience at ICM is aimed toward the full development of the potential each student brings to our school. Administrative expertise, professional faculty, modern equipment, current materials and teaching methods, and an environment designed for learning contribute to the achievement of this goal.

Our programs stress the practical application and experience necessary to succeed in our students chosen fields.

ICM has always been dedicated to keeping abreast of the changes and innovations affecting business to provide our students with the most current, modern business education available.

We do this by adding new programs and revising and evaluating our curricula to insure that they reflect the latest advances of the industry. Our educational objective is always to provide each and every student with the necessary skills and maturity to compete successfully in today's job market.

That is our obligation to ourselves and our responsibility to you.

Accreditation:

ICM is accredited by the Association of Independent Colleges and Schools (AICS), an independent accrediting agency recognized by the United States Office of Education.

Accreditation assures the student that the school has met all educational and operational standards imposed on the school by the accrediting commission governing the school's curriculum, equipment, instructors, placement, recruiting practices, and also insures that the Institution is financially sound and able to meet all the teaching requirements of its courses.



Approvals:

Licensing:

ICM is licensed by the Ohio State Board of School and College Registration. Its programs are approved for veteran's training and clients of the Ohio Bureau of Vocational Rehabilitation. Registration 70-12-002-70.

Associate Degree in Specialized Business

The Institute of Computer Management is approved by the Ohio State Board of School and College Registration to award the Associate Degree in Specialized Business in data processing upon the successful completion of the academic requirements for the Computer Management program.

Professional Affiliations

ICM staff and faculty are active in many organizations to stay informed of the changes in business and education.

1. Ohio Council of Private Colleges and Schools
2. Data Processing Management Association
3. Northeastern Ohio Chapter of Proprietary Schools
4. Better Business Bureau
5. Chamber of Commerce
6. Association for Systems Management
7. Cleveland Area Business Teachers Association
8. Cleveland Growth Association

Placement

The Placement service at ICM is offered to all graduates at no cost and is supervised personally by the Director of Placement.

Prior to seeking full-time employment in their chosen fields, ICM students are given intensive training in all phases of conducting a successful job search.

The training includes writing cover letters, preparing resumes, do's and don'ts of interviews, learning how and where to submit employment applications, as well as developing strong interviewing techniques by participating in mock interviews.

In addition to providing proper training, the placement service works closely with employers in all vocational areas.

Close contact is maintained with the business community through company visits by the Director, conducting tours of ICM for employers, mailing resumes and transcripts to interested companies, attending meetings of professional organizations, providing in-school interviewing facilities, and performing candidate screening assignments for employers on request.

By providing these employer oriented services and maintaining contact with the business community, the placement service assists ICM graduates in obtaining interviews for positions in which they are interested.

While the primary goal of the placement service is to provide the training and assistance necessary to secure the first position, all experienced graduates are also eligible in making career changes.

Educational Facilities, Equipment, and Location

ICM is located in the Diamond Shamrock Building at the corner of East 12th Street and Superior Avenue. This modern office facility in the center of Cleveland's business district offers the students a

professional atmosphere conducive to learning. ICM occupies over 11,300 square feet consisting of classrooms, labs, offices, lunchroom, and library.

In addition to textbooks, students have access to the latest journals and periodicals in the field of automated business machines.

The school has the following computer equipment on its premises for "hands-on" training exclusively for the students:

1-Univac 90/25	Processing Unit 98K
1-0778	High Speed Printer 300 LPM
1-0719	Card Reader
1-0605	Card Punch
1	CRT Console
2-8416	Disk Drives .57.8 Million Character Bytes Per Unit
12-024	Keypunches
2-026	Keypunches
1-029	Keypunch
2-1610	Univac Verifying, Interpreting Punch
1-082	Sorter

Library

The library at the Institute of Computer Management is open five days per week from 10:00 a.m. until 4:00 p.m. It contains the latest journals, manuals, texts, magazines, and periodicals in the fields of business and electronic data processing. In addition, texts covering topics in accounting, statistics, English and composition, psychology, economics, business law, systems analysis, and business mathematics are available for reference or research.

The downtown location of ICM makes it possible for students to avail themselves of public libraries for independent research. Specialty libraries, dealing with such subjects as business and law, are also located nearby.

Bookstore

All books and supplies can be purchased through the ICM Bookstore.



Academic Calendar

The starting dates for various programs at ICM are as follows:

1. Computer Programming and Applied Computer Programming With Business Procedures.

February 20, 1978

May 15, 1978

July 10, 1978

September 11, 1978

November 13, 1978

February 12, 1979

May 14, 1979

July 9, 1979

September 10, 1979

November 12, 1979

2. Computer Management

August 28, 1978

October 16, 1978

August 27, 1979

3. Keypunch

Classes begin on Tuesday of each week throughout the year when machines are available.

School Hours

8:00 A.M. to 6:30 P.M.

Monday through Friday

Each class is given a 15 minute break during scheduled class hours.

Class Hours

Applied Computer Programming With Business Procedures:

8:00 a.m. to 1:15 p.m. Monday through Friday

9:00 a.m. to 2:15 p.m.* Monday through Friday

1:15 p.m. to 6:30 p.m.* Monday through Friday

*When available.

Computer Programming:

6:15 p.m. to 10:30 p.m. Monday, Wednesday, Thursday

Computer Management:

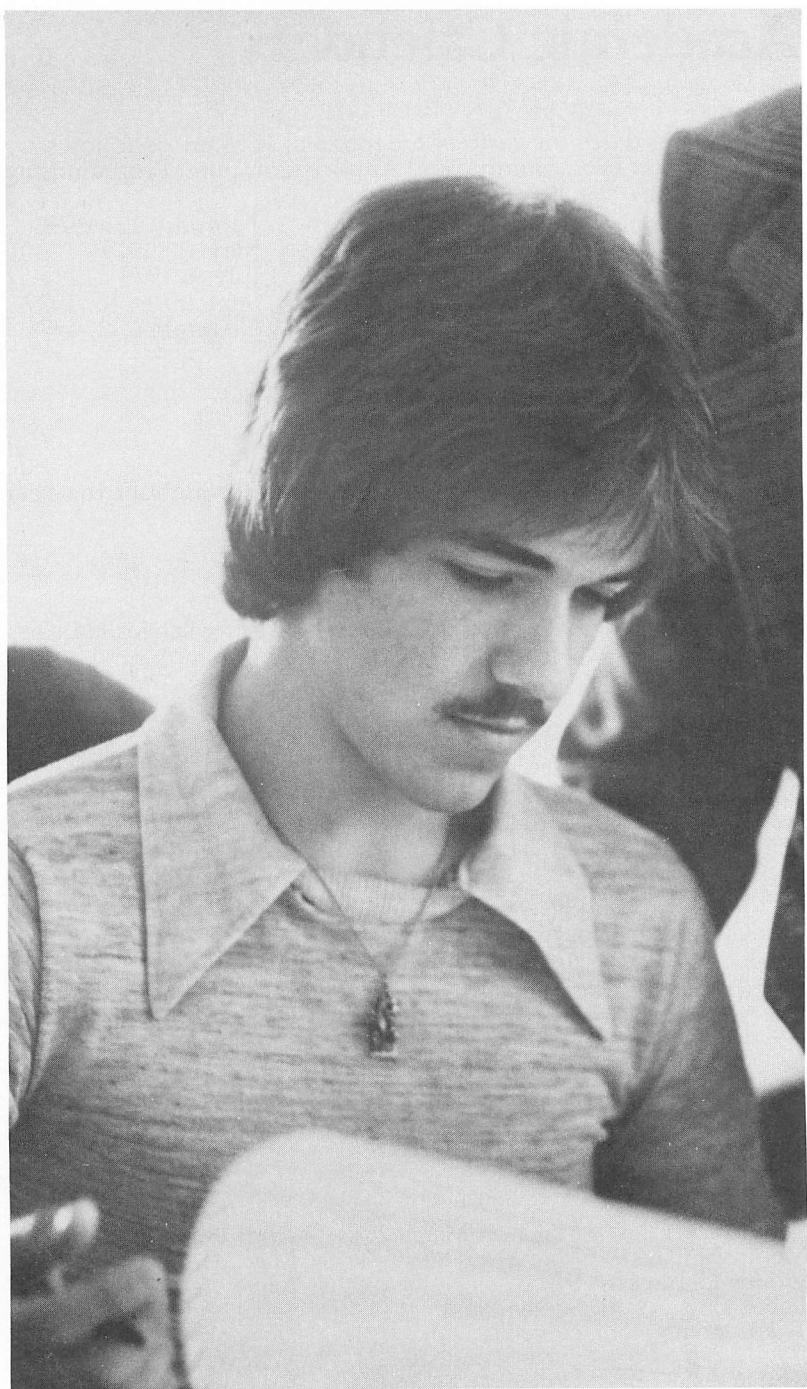
8:00 a.m. to 1:00 p.m. Monday through Thursday

Keypunch:

2:00 p.m. to 5:00 p.m. Monday through Friday

Holidays

	1978	1979
Easter	March 24-March 26	April 13-April 16
Memorial Day	May 29	May 28
Independence Day	July 4	July 4
Labor Day	September 4	September 3
Thanksgiving	November 23- November 26	November 22- November 25
Christmas	December 23-January 1	December 22-January 1



Admission to the Institute of Computer Management

Admission Requirements:

A student seeking admission to the Institute of Computer Management must be a high school graduate or have a General Education Diploma (GED) granted by the state or the armed forces, should indicate interest and motivation in a personal interview with an admission representative, and must pass an aptitude test in his field of interest.

Previous training is not a requirement. ICM makes every effort to determine a student's ability to succeed in his chosen field. We are interested in accepting only those students who have the desire and aptitude to complete their chosen program and secure employment.

The admission representative will provide guidance in helping the student make the program selection that best suits his abilities.

Admission Procedures:

Students interested in applying to ICM can call or write the school to make an appointment for a personal interview. At this time the admission representative will discuss the programs offered by ICM and administer the aptitude test in the applicant's field of interest. Based on the results of the interview and aptitude test, the student is notified of his acceptance or rejection.

Advanced Placement:

Students with previous college or business school education must submit a transcript and course description to the Director of Education for exemption of courses in the Associate Degree in Specialized Business programs.

Affirmative Action Policy:

ICM admits and educates students without regard to sex, race, religion, or age.

Orientation:

Realizing the importance of adjusting well to a new environment, the Institute of Computer Management makes a concerted effort to provide a thorough orientation program for its students. This is accomplished in three ways.

1. Immediately after a student is accepted by ICM until he begins his education, he receives on a monthly basis through the mail, copies of the school newspaper and pertinent information about such topics as financial aid, school organizations and activities, etc. In this way the student is able to preview student life at ICM and begin immediately to feel a part of the student body.
2. A few weeks prior to the start of the student's education at ICM, an open house is conducted for each course of study. During this program parents and students tour the facilities, and are introduced to the administration, faculty, and staff. The academic requirements of each program are stressed and students are given the opportunity to purchase books and visit the financial aid office for answers to any last minute financial questions. Also, interested students and parents may visit apartments for housing in the area.
3. The first day of class is also devoted to orientation. All final details and questions are handled and school policies and regulations are reviewed.

Financial Aid / Tuition

Financial Aid at the Institute of Computer Management

ICM participates in a number of financial aid programs available to all eligible students enrolled in approved post-secondary institutions. For continued eligibility, students must maintain satisfactory academic standing throughout the course of study. These programs include grants (or awards which do not have to be repaid at any time), and loans which are repayable.

Financial aid is generally determined by the ability of the student and his family to pay for educational costs and is based upon information submitted in an application form. Grant forms may be obtained from ICM.

BEOG—Basic Educational Opportunity Grant

The Basic Educational Opportunity Grant (BEOG) is awarded to students who show they need assistance financially to attend post secondary institutions. It is a federally funded program and students may apply through their high schools or obtain an application from the financial aid office at ICM. Disbursements are made at least twice per academic year.

OHELC—Ohio Higher Education Loan Corporation

The Ohio Student Loan Program offers low interest loans to students. If the student is eligible, there is no interest charged during attendance or nine months after graduation. Students should contact their lender to apply. The maximum loan is \$2500 per academic year. The loan is repayable nine months after graduation in monthly installments at a 7% interest rate. Students need co-signers at most lending institutions.

NDSL—National Direct Student Loan Program

The National Direct Student Loan Program is offered to students who do not have co-signers and need assistance. This loan is similar to the Ohio Student Loan Program except loans are awarded through ICM. Students must fill out a "needs analysis" in order to apply for NDSL. NDSL offers a rate of interest of 3%. Repayment is made through monthly installments at a minimum of \$30.00 per month.

SEOG—Supplemental Educational Opportunity Grant

The Supplemental Educational Opportunity Grant is offered to students who show exceptional financial need. This program is also awarded through ICM. Grants range from approximately \$250 to \$500.

Veterans Educational Benefits

Certain veterans and dependents of veterans are eligible for educational benefits. Inquiries regarding eligibility should be addressed to the Veterans Administration.

Veterans Benefits, as of the latest schedule, are as follows:*

	Full Time Benefits	Three-Quarter Benefits	Half Time Benefits
Single	311.00	233.00	156.00
Married	370.00	277.00	185.00
Married—1 child	422.00	317.00	211.00
Married—2 children	448.00	336.00	224.00
Married—3 children	474.00	355.00	237.00

Additionally, ICM is approved by various federal and state agencies which sponsor education and rehabilitation. Among these are the Department of Vocational Rehabilitation, Immigration and Naturalization Service, and other agencies concerned with financial assistance to students.

*See Veteran's Administration for any recently published changes in benefits.

Miscellaneous:

Many civic and local organizations offer scholarships for higher education. ICM encourages students to such awards and complies with any conditions attached to them.

Tuition and Fees:

At the time of enrollment, a registration fee of \$100 is required for all programs. In the event the student does not begin school, the registration fee is retained by the school.

Tuition

Program	Total Tuition	Number of Hours	Award
Computer Management	\$4730*	1640	Associate Degree in Specialized Business
Applied Computer Programming with Business Procedures	\$2740*	1000	Diploma
Computer Programming (evening)	\$1450*	480	Certificate
Keypunch	\$ 375*	120	Certificate

*Includes \$100 registration fee.

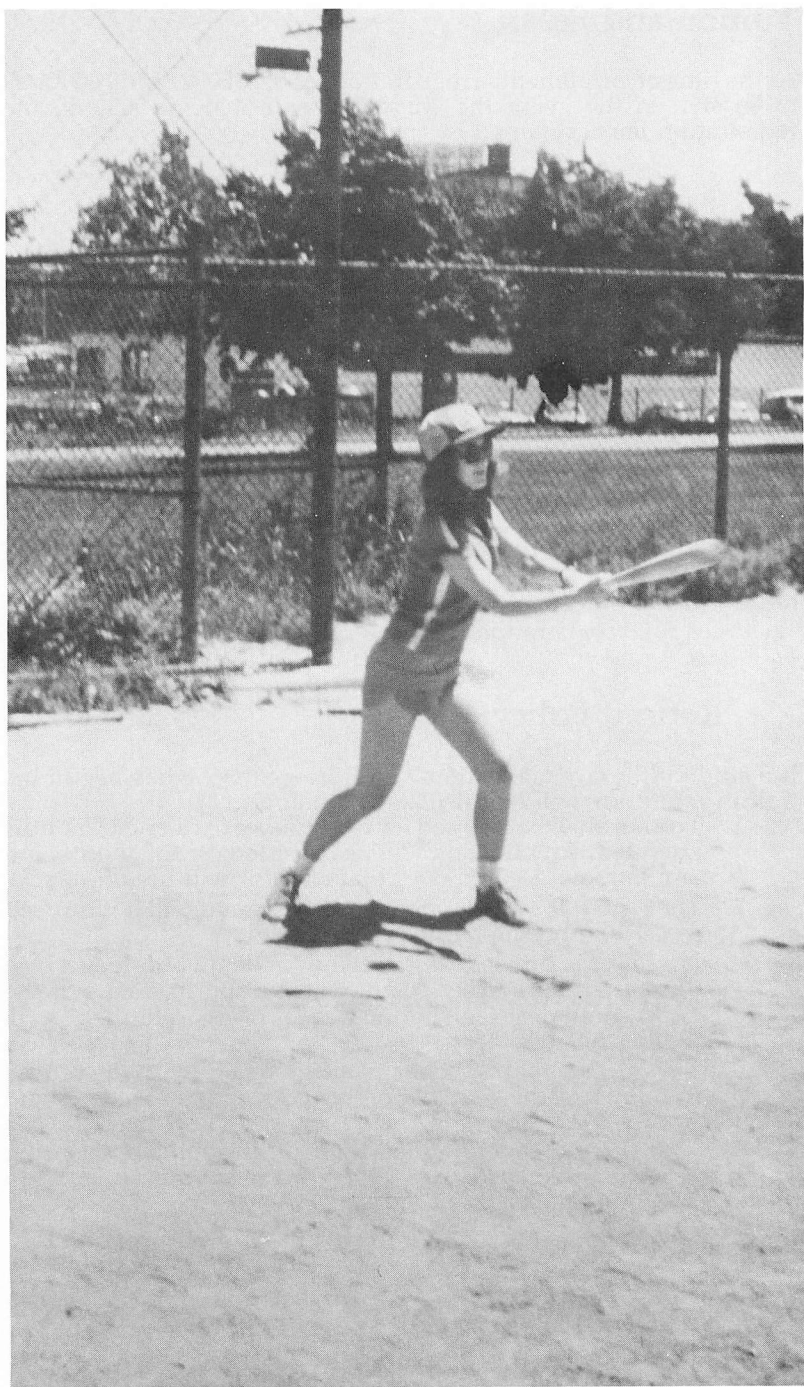
Refund Policy:

If a student for any reason must withdraw after he has begun his training, refunds will be calculated as follows:

1. Tuition shall be charged for the number of calendar months attended. Any fraction will be considered a full month and any money received over that amount will be refunded.
2. The registration fee is non-refundable and will not be used in calculating the monthly charge.
3. In case of serious illness, accident or death attested to by a competent authority, all pre-paid tuition in excess of the non-refundable registration fee, will be refunded on a weekly pro-rata basis.

This refund policy is in agreement with the refund policy guidelines of the Association of Independent Colleges and Schools.

Any student attending ICM through a sponsoring state or federal agency will be subject to the refund and tuition calculation policies of that agency.



Student Activities and Organizations

Participation

There are many organizations for student participation outside the classroom at the Institute of Computer Management. Students are encouraged to participate in co-curricular activities and make their life at ICM more than a book-and-classroom experience, but to exercise a degree of moderation that insures adequate pursuit of their primary purpose for coming to ICM — education.

Life at ICM is a unique and complex experience. Unique because it provides a student with opportunity for intellectual stimulation and social and moral growth in a wide array. Complex because education should be a subtle blend of many activities, each one complimenting or supplementing the other. Altogether, it is an experience which should alter and illuminate the lives of all who take full advantage of it.

The Student Activities Program

A well-rounded program of student activities, organized by the Student Activities Association (SAA), supervised by faculty sponsors, administered by the Director of Public Relations, provides numerous opportunities for valuable co-curricular experiences. These include athletic events, social organizations, social events, student services, cultural, recreational, and educationally affiliated activities and organizations.

The Student Activities Association

The Students Activities Association (SAA) is an organization which represents and serves the student body. It provides channels for communicating student ideas, suggestions and opinions; facilitates the planning and implementation of activities and programs; and creates opportunities for experience in assuming and exercising responsibility.

If a student enjoys outdoor activities, the SAA sponsors skiing, skating and tobogganning in the winter and canoeing, swimming, picnicking, and horseback riding in the summer.

Of the many organizations sponsored by the Student Activities Association, a few are: the Intramural Softball League, Social Committee, Association of Systems Managers Student Chapter (ASM), and Chess Club.

The SAA is a service as well as a social organization. For commuting students needing parking facilities, monthly parking permits are available from Student Activities representatives.

The SAA participates in fund drives and volunteer work for organizations such as the Red Cross, Children's Hospital, the Northern Ohio Patrolmen's Benevolent Association (NOPBA), and the Association for Mentally Retarded Citizens.

Publications

If students have a flair for writing, three publications are at their disposal.

The *Pittsburgh-Cleveland Messenger*, a monthly newspaper written and edited by students, provides an outlet for news, student opinion, advertising, and entertainment.

The *IC Memo*, a quarterly publication, affords students a chance to learn professional writing style.

The Student Handbook, with input from students, instructors, and administrators, provides students with pertinent information concerning school policies, personnel, and curriculum.

The City

If ICM's activities don't provide enough excitement, Greater Cleveland will.

Students begin their weekends in a special way with a "Party in the Park" on Friday afternoons at Chester Commons, an ultramodern, concrete sculptured park across the street from the school. The fun starts in early May and lasts until late September. Bands, hotdog vendors, flower and fruit carts, and TV coverage add to the gala affair.

For student's shopping convenience, Park Centre Mall, Cleveland's city within a city, is located across the street from the school. Park Centre, a twin tower 23-story apartment complex, features many shops and services in its underground mall. A supermarket, drug store, bank, savings and loan, beauty and barber shop, movie theater, medical/dental facilities, record mart, craft shop, flower shop, steak house, nationality restaurants, and apparel stores creates this exciting city within a city where students shop.

ICM is located a short five-minute walk from the business, shopping, and entertainment district of downtown Cleveland. This dynamic city is one of the most well-known cultural centers in the U.S. no matter what your interest — art, music, sports, theater, libraries, Cleveland is the place to find it. Lake Erie, Playhouse Square, Terminal Tower, Convention Center, the Metropolitan Park System, and Cleveland's Public Auditorium, Museum of Art, Music Hall, Public Library, and Stadium are all close by for enjoyment.

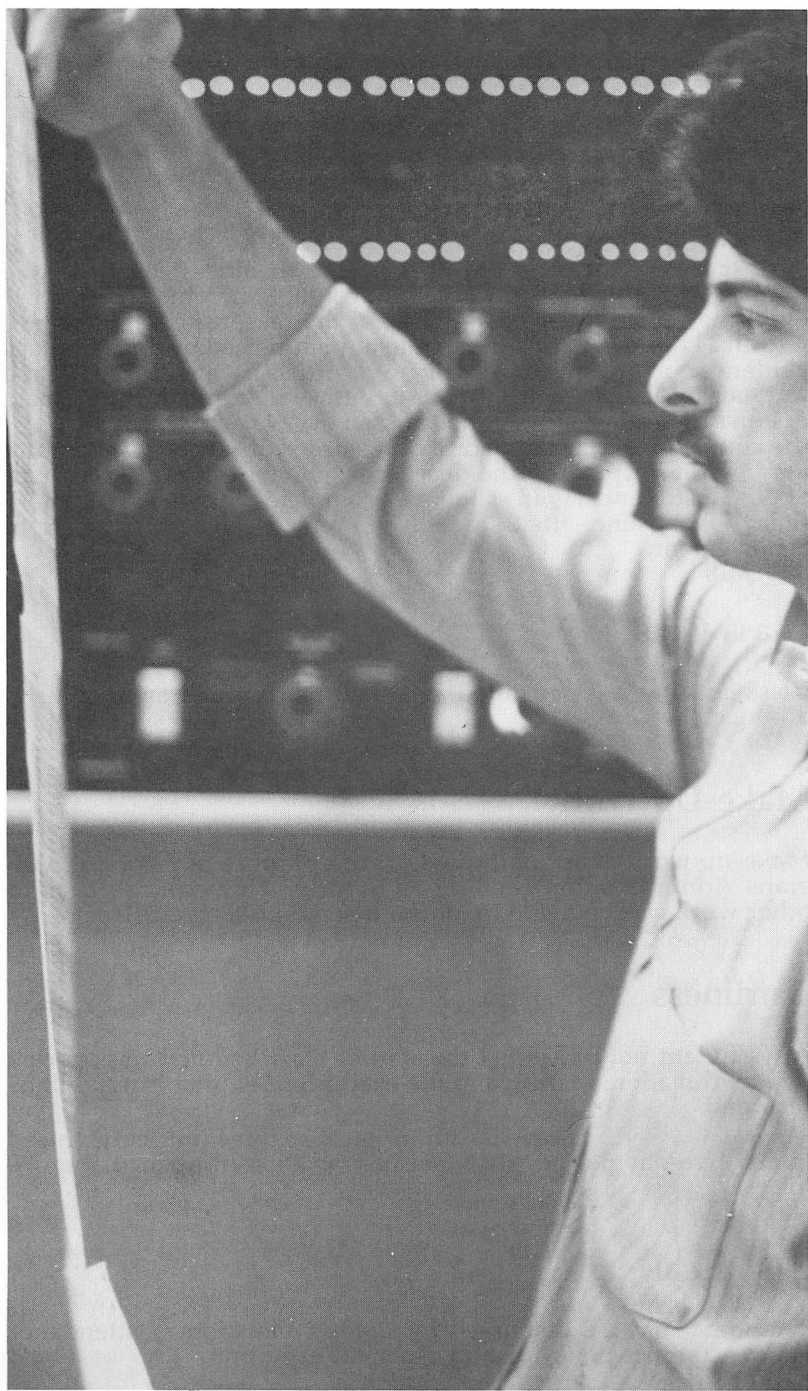
ICM is proud to be a part of this vital, growing city.

Accommodations

Because the school is located in downtown Cleveland, there are many apartment complexes within walking distance of ICM which provide comfortable accommodations for our students.

Also available are the YMCA and YWCA as well as residential facilities in the surrounding areas which are approved by the school.

ICM's Admissions Office will assist each student in locating living quarters. For more information, contact the Institute of Computer Management.



Academic Information

Absence and Attendance

An excused absence is one that is due to illness, death in the immediate family, and any other unavoidable circumstances; however, the school must be apprised of the reason for said absence within 24 hours and the reason must be supported by documentary evidence, or said absence will be recorded as unexcused. Three unexcused absences in any one month will result in immediate dismissal. When a student has missed over 15% of the duration of the course by excused and/or by unexcused absences, his training may be interrupted by the decision of the Director of Education. Should a student stay in school and complete the course with more than 15% absence, that student will only receive a certificate of achievement.

Class-Cuts

Class-cuts are not permitted and shall be recorded as unexcused absences.

Make-Up Work

Make-up work is not permitted for the purpose of receiving Veterans Administration training allowances. However, all tests or other work can be made up at the discretion of the instructor.

Tardiness

Any student not present at the start of his scheduled class period will be considered tardy, and the exact number of minutes will be recorded.

Excessive tardiness, such as three times unexcused in any five-day period, shall be cause for discontinuance of training.

Dismissal

A student may be dismissed for grades, violation of attendance policy, conduct policy or non-payment of tuition.

Full Time Students

Full time students will be those enrolled in either Applied Computer Programming with Business Procedures or Computer Management.

Leave

Leave of absence is granted only to students who wish to temporarily interrupt their training for personal reasons. A request of leave must be made in advance in writing, or time away from school will be considered an unexcused absence. The Veterans Administration will be notified immediately when a veteran student is granted leave of absence.

Progress Reports

These reports will be sent to the student at the specified times during the course. In addition to the technical aspects of the course, the reports cover such topics as initiative, programming ability, business mathematics, accounting, operating efficiency and test scores. The final mark is a numerical grade based on 100%.

In the Computer Programs, the individual courses are graded according to the following ledger:

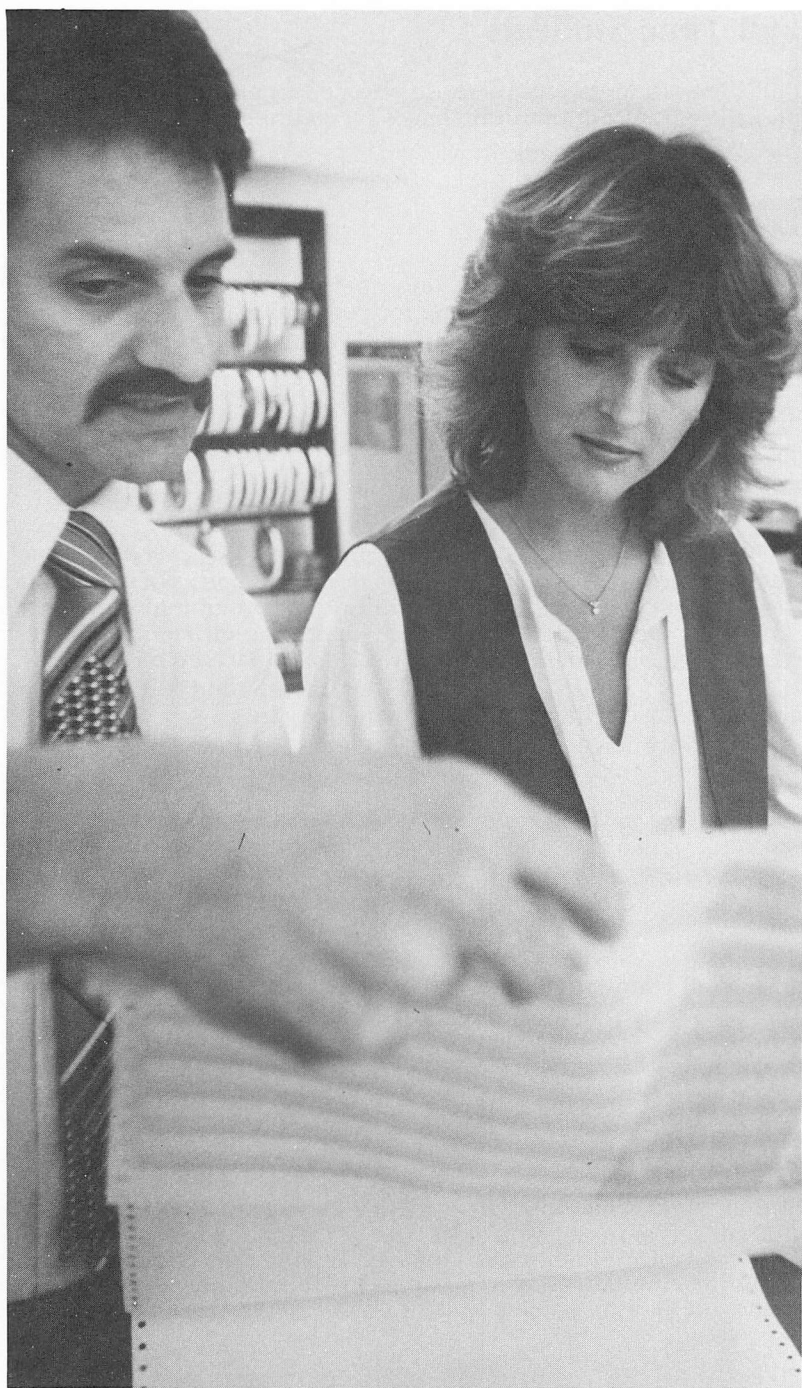
Percentage	Grade	Grade Points
90-100	A	4
80-89	B	3
70-79	C	2
60-69	D	1
0-59	F	0
	I	Incomplete
	W	Withdrawal

To be eligible for graduation the student must earn an overall cumulative grade point average of 2.0 or 70%.

The overall cumulative grade point average is determined by dividing the total grade points earned by the total credit hours attempted.

Probation

Students must maintain an academic average of 70% or a C. Any student achieving a grade of less than 70% on a progress report will be placed on probation until the next report. If the student fails to bring his cumulative average up to the required level by the next report, he will be subject to dismissal.



Associate Degree in Specialized Business

All students enrolled in the Computer Management Program who graduate with a 2.0 grade point average and who have an 85% attendance record will be awarded the Associate Degree in Specialized Business.

Diplomas

All students who have maintained a 70% or a 2.0 grade point average and are in satisfactory standing with the school will receive a diploma for all programs of 1000 hours or more in length. Graduates of other programs will receive a Certificate of Achievement.

Re-Entrance

If it becomes necessary for a student to withdraw from a program for a valid reason, his re-entrance will be decided by the Director of Education on an individual basis and provision for continuation will be made accordingly.

Repeating courses

All failed courses must be repeated. The second grade earned will be used in calculating the grade point average. (Each course to be repeated must be paid in full.)

Transfer of credits to ICM

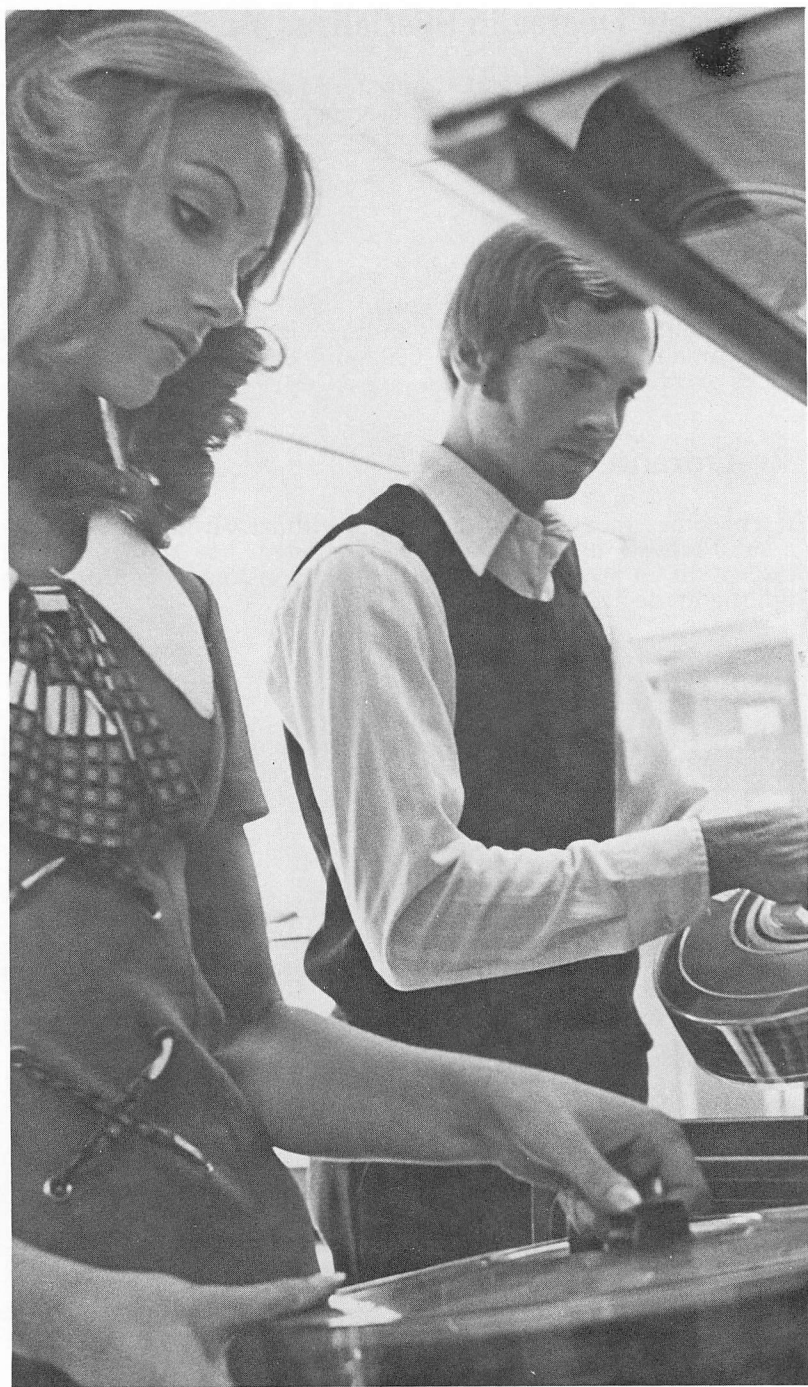
Credit transferability of related work completed at another institution will be at the discretion of the Director of Education with regard to subject compatibility with the ICM program.

The courses for which transfer of credit is sought must have been completed with at least a "C".

The student must provide an official transcript and course description for evaluation.

Transfer of credits from ICM

Many colleges accept ICM credits toward the completion of requirements for a baccalaureate degree in business or computer science. For more information contact our admissions department.



Commencement

Formal commencement exercises are held annually in July.

Transcripts

There is no charge for the first transcript of a student's records. Subsequent transcripts are \$1.00 each and can be obtained by contacting the Director of Education.

Change of Address

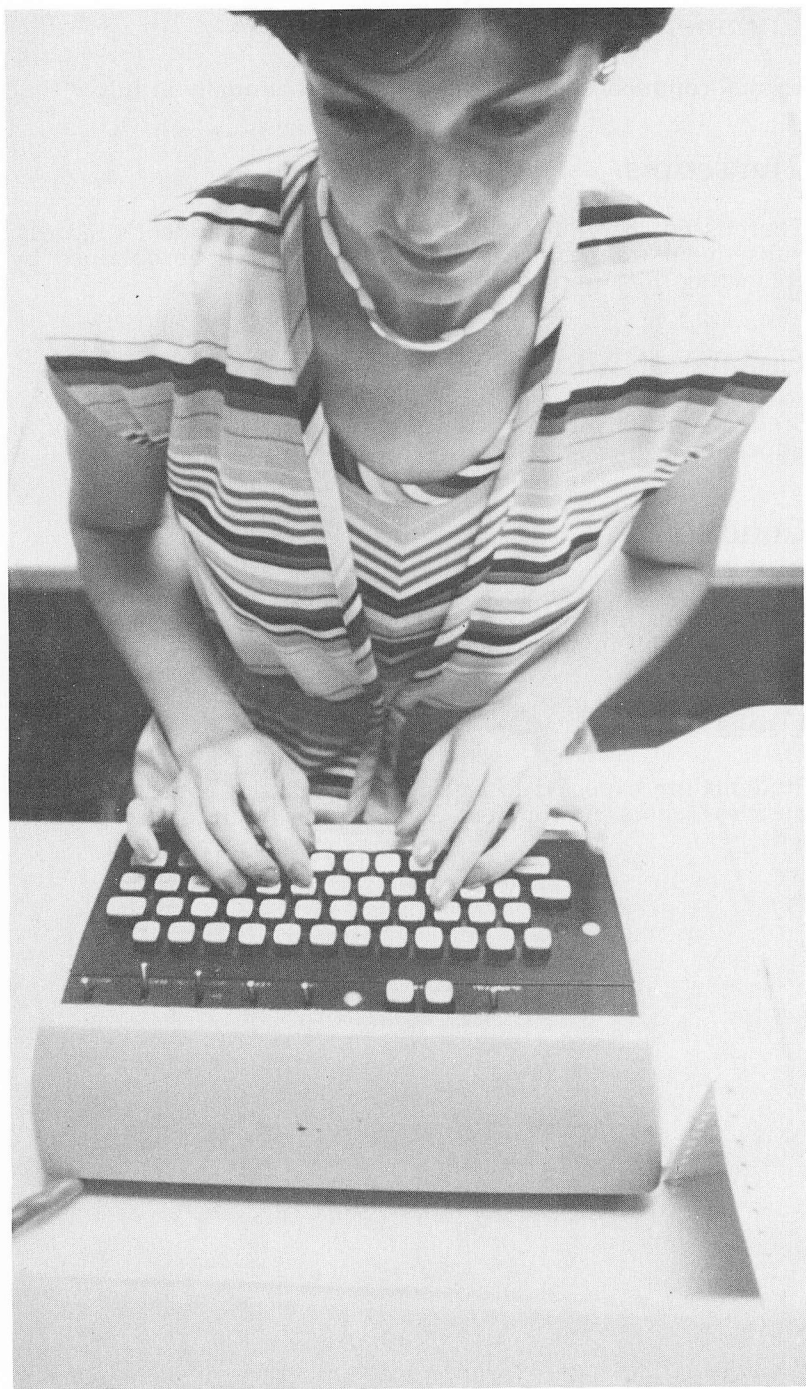
Students are to report any change of address to the Director of Education.

Conduct

Proper deportment and conduct are expected of all students during class sessions and while on the school premises. Repeated misconduct can result in dismissal from the school.

Dress

Students are expected to wear clothing that is appropriate in a business school environment. Extremes in clothing are not permitted.



Programs of Study

The Institute of Computer Management's main programs of study are in the field of computer programming and business. The content of the program varies according to the needs, background and aptitude of the students. The objective of the programs, however, is the same — to produce a knowledgeable student with the skills necessary to compete in the highly technical and competitive fields of business and electronic data processing.

Program Title	Hours	Award
1. Computer Management	*1640	Associate Degree in Specialized Business
2. Applied Computer Programming with Business Procedures	1000	Diploma
3. Computer Programming	480	Certificate
4. Key punch	120	Certificate

*Credit hours

Data Processing and Computer Science

Governmental agencies, corporations, schools and universities, medical centers, banks, and insurance companies are just a few of the organizations and businesses that rely on data processing and computer services to research and process information.

ICM has been training data processing professionals since 1963. We offer a number of programs of study in data processing. Each program emphasizes actual experience on the most modern computer equipment — the Univac 90/25 system.

Our students are trained to meet the demands of this expanding field. To help you prepare specifically for the data processing career that you want, ICM offers a variety of programs including our Computer Management Associate Degree in Specialized Business program. Applied Computer Programming and Business Procedures is designed to cover computer programming for business systems and to develop proficiency in the application of computers to typical business systems in an operating company.

If you elect this course and later decide you would like to take the degree program, all your work from this course can be transferred to the Computer Management Program. The program provides an in-depth knowledge of business theory and practice along with a broad understanding of modern computer concepts and techniques. As a graduate of this program, you'll have the credentials to earn a position as computer operator, business computer programmer, or junior systems analyst.

We also have a course for the student with business experience . . . Computer Programming. Scheduled in the evening, this program gives the student thorough, working knowledge of the computer, skill in the art of programming and a basic understanding of systems development.

Applied Computer Programming with Business Procedures

Diploma

1 academic year (10 months)

1000 total course hours

Objective: *This program is designed to thoroughly orient and familiarize the student with every aspect of computer programming for business applications. It is developed around a progressive exercise and systems approach to programming proficiency with the application of computers to typical business problems in an increasingly complex sequence. In addition to the factual aspects of the curriculum, it is taught on a business and professional level. This program should enable the graduating student to obtain employment as a computer operator or junior programmer.*

Course Description	Class Hours
A. Introduction to Data Processing Concepts	12
B. Introduction to Unit Record Equipment	10
C. Introduction to Accounting	64
D. Business Mathematics	64
E. Computer Operations*	50
F. Business Applications	40
G. Disk and Tape Concepts	30
H. Placement Procedures	50
I. Computer Programming I (COBOL)	180
J. Computer Programming II (ADVANCED COBOL)	175
K. Computer Programming III (RPG)	140
L. Computer Programming IV (Assembler)	73
M. Computer Programming V (Fortran)	64
N. Advanced DP Concepts	48
Total Hours 1000	

*Time is devoted to formal operations in the early part of the course. However, students have hands-on computer time throughout the duration of the course.

Computer Mangement

Associate Degree in Specialized Business
2 years (8 months/academic year)
4-16 week semesters

Objective: *The curriculum is designed to provide the student with in-depth knowledge of business theory and practice as well as a broad understanding of modern computer concepts and techniques in the handling of data, as applied to business systems. This two year program should enable the graduating student to obtain a position as a computer operator, a business computer programmer or junior systems analyst.*

A unit of credit is determined by the number of class-hours per semester. (1 lab hour is equivalent to 1/2 class-hour.) 18 class-hours per semester is equivalent to 1 (one) credit. Any fractional part of a credit is truncated. This policy makes ICM's standards exceed minimum requirements set by the State Board of Registration.

Course of Study:

First Semester	Hours/Week	Credits
101 Fundamentals of EDP	4 lecture 2 lab	4
111 Computer Programming I	4 lecture 2 lab	4
121 Accounting I	4 lecture	3
131 Communications I	4 lecture	3
141 Analytical Methods I	4 lecture	3
	<hr/>	<hr/>
	20 lecture 4 lab	17
 Second Semester	 Hours/Week	 Credits
201 Economics	4 lecture	3
211 Computer Programming II	4 lecture 2 lab	4
221 Accounting II	4 lecture	3
231 Communications II	4 lecture	3
241 Analytical Methods II	4 lecture	3
	<hr/>	<hr/>
	20 lecture 2 lab	16
 Third Semester	 Hours/Week	 Credits
301 Advanced COBOL	4 lecture	3
311 Computer Programming III	3 lecture 2 lab	3
351 Systems Analysis	4 lecture	3
361 Psychology	4 lecture	3
371 Sociology	4 lecture	3
	<hr/>	<hr/>
	19 lecture 2 lab	15
 Fourth Semester	 Hours/Week	 Credits
401 Operating Systems	4 lecture	3
411 Computer Programming IV	4 lecture 2 lab	4
461 Business Law	4 lecture	3
481 Computer Programming V	4 lecture 2 lab	4
491 Advanced DP Concepts	3 lecture	2
	<hr/>	<hr/>
	19 lecture 4 lab	16

Computer Management (2nd year)

Associate Degree in Specialized Business

2 years (1st year transfer of credit from Applied Computer Programming with Business Procedures; 2nd year-8 months)

2-16 week semesters — 1000 hours transfer of credit
640 hours 2nd year

1640 hours

Transfer from the "Applied Computer Programming with Business Procedures" Program.

Objective: For the transfer consideration into the two year program the applicant should have completed this program within the last two years with a minimum grade average of 75%. A student with an average of 70% can be accepted on a probation basis. To complete the two year curriculum, the transfer applicant must attend the specially designed third and fourth semester as indicated below.

Course of Study:

First Semester	Hours/Week	Credits
131 Communications I	4 lecture	3
201 Economics	4 lecture	3
221 Accounting II	4 lecture	3
351 Systems Analysis	4 lecture	3
361 Psychology	4 lecture	3
	20 lecture	15
Second Semester	Hours/Week	Credits
231 Communications II	4 lecture	3
241 Analytical Methods II	4 lecture	3
371 Sociology	4 lecture	3
401 Operating Systems	4 lecture	3
461 Business Law	4 lecture	3
	20 lecture	15

Total Hours Second Year: 640 Hours

The correlation for transfer of Applied Computer Programming with Business Procedures to Computer Management program is shown below.

Credits	Waivered Associate Degree Courses	1000 Hour Topic Satisfying Waivered Courses
4	101 Fundamentals of EDP	A, B, E, F, G,
4	111 Computer Programming I	I
3	131 Accounting I	C
3	141 Analytical Methods I	D
4	211 Computer Programming II	J
3	311 Computer Programming III	K
3	301 Advanced COBOL	J
4	411 Computer Programming IV	L
3	481 Computer Programming V	M
2	491 Advanced DP Concepts	N

Computer Programming

Evening/Part Time

Certificate

One academic year (10 months)

480 total course hours

Objective: *This program is designed to give the student a thorough working knowledge of the computer, a skill in the art of programming and a basic understanding of problem analysis. The student is taught business applications and is required to write programs in basic as well as advanced concepts.*

This program should enable the graduating student to obtain employment as a computer operator or a junior programmer.

Course of Study:	Class Hours
A. Introduction to Data Processing Concepts	12
B. Introduction to Unit Record Equipment	10
C. Computer Operations*	30
D. Business Applications	40
E. Disk and Tape Concepts	30
F. Placement Procedures	30
G. Computer Programming I (COBOL)	120
H. Computer Programming II (ADVANCED COBOL)	100
I. Computer Programming III (RPG)	80
J. Advanced DP Concepts	18
K. Basic Computer Mathematics (Numbering Systems)	10
	<hr/> 480

*Time is devoted to formal operation in the early part of the course. However, students have hands-on computer time throughout the duration of the course.

Keypunch Program

Certificate

10 weeks

120 total hours

Prerequisite: Typing

Objective: *The Keypunch is the most basic of all machines in Data Processing. The student enrolled in this program will get a general exposure to EDP with emphasis placed on speed and proficiency with the keypunch.*

The practical applications are designed to be compatible with what can be expected in the business world.

Course of Study:	Class Hours
Introduction	15
Card Design & Program Drum Card	15
Error and Correction Procedures	15
Special Features	15
The Verifier	20
Practical Application	40
	<hr/> Total Hours 120

Requirements for Graduation:

8,000 strokes per hour.

Course Descriptions

101 FUNDAMENTALS OF EDP

4 lecture 2 lab 4 credits

Hollerith code; card concepts; record design; unit record equipment; computer operations; general history of computers; digital computers; analog computers; numbering systems; computer functions; logic; flowcharting; documentation.

111 COMPUTER PROGRAMMING I (COBOL)

4 lecture 2 lab 4 credits

Introduction to COBOL; divisions and elements of COBOL; sequential card processing; multi-record file processing.

121 ACCOUNTING I

4 lecture 0 lab 3 credits

The nature of Business Accounting; the double entry system; use and function of subsidiary ledgers; cash and payroll accounting; entries to ledger trial balance preparation; completion of the accounting cycle for service and enterprise and merchandising operations, closing books and preparation of balance sheet and income statements.

131 COMMUNICATIONS I

4 lecture 0 lab 3 credits

Effective word usage; language structure; sentence structure; punctuation and style mechanics; paragraph construction; letter writing; creative writing; resume writing.

141 ANALYTICAL METHODS I

4 lecture 0 lab 3 credits

Percentage and discounts in business, simple and compound interest; payroll and taxes; financial statements; introduction to statistics and graphs; stocks and bonds.

201 ECONOMICS

4 lecture 0 lab 3 credits

Introduction to the economic organization of industry; practical treatment of important commercial functions and modern problems arising out of recent changes in economic systems and ideas; human wants and scarcity; basic concepts of capitalism; monetary principles and investment; business cycles.

211 COMPUTER PROGRAMMING II (COBOL)

4 lecture 2 lab 4 credits

Includes indexed sequential, partitioned sequential, and sequential disk file processing; segmentation of files; tables and sub-scripting; detailed coverage of all other advanced COBOL concepts.

221 ACCOUNTING II

4 lecture 0 lab 3 credits

Plant assets; cash controls; payroll and taxes; stock and stockholder records; partnerships and corporation accounting; breakeven analysis; gross profit analysis; funds and cash flow statements; ratio analysis; current position presentation.

231 COMMUNICATIONS II

4 lecture 0 lab 3 credits

Research technique; library science; group and panel discussions; oral presentations; speeches and debates; job preparation and interview techniques.

241 ANALYTICAL METHODS II

4 lecture 0 lab 3 credits

Integer numbers; common fractions; the decimal system; variables, constants, and parameters; equations and inequalities; systems of equations; set theory; statistical measurements.

301 ADVANCED COBOL

4 lecture 2 lab 4 credits

Includes indexed sequential, partitioned sequential, and sequential disk file processing, segmentation of files; tables and sub-scripting; detailed coverage of all other advanced COBOL concepts.

311 COMPUTER PROGRAMMING III (RPG)

4 lecture 2 lab 4 credits

Discussion and development of forms; fixed logic; table look-up; exercises in the Inventory system.

351 SYSTEMS ANALYSIS

4 lecture 0 lab 3 credits

The feasibility study; system investigation; systems design; card and forms design, data base makeup; systems planning and considerations for systems generation; multiprogramming and multiprocessing; executive program functions; job control program and system-operator communication; term project.

361 PSYCHOLOGY

4 lecture 0 lab 3 credits

The study of human behavior with particular attention to perception, learning memory, thinking and emotional life, and individual differences in intelligence, aptitude, and personality; emphasis on the scientific nature of psychological investigations; research methods are discussed and related to daily life and everyday problems.

371 SOCIOLOGY

4 lecture 0 lab 3 credits

The relationship of sociology to society; culture; social organization; social interaction; social change and its overall effect.

372 ART APPRECIATION—elective

4 lecture 0 lab 3 credits

Art and its relationship to the humanities; emphasis on what art is; elements and principles of design; visual arts; history of art; an effort is made to give the student an appreciation for more than just the material components of art. An elective based on demand.

401 OPERATING SYSTEMS

4 lecture 0 lab 3 credits

In-depth review of different types of operating systems; compilers; assemblers; translators; generators; emulators and simulators; term project.

411 COMPUTER PROGRAMMING IV (Assembler)

4 lecture 2 lab 4 credits

Introduction to assembler language; instruction formats; core configuration; macros exercises designed for the assembler language.

461 BUSINESS LAW

4 lecture 0 lab 3 credits

Nature and sources of law and administration; contracts affecting agency, employer, and employee; partnerships; corporations; property; deeds of conveyance; mortgagor and mortgagee relationships; landlord and tenant; torts and business crimes.

481 COMPUTER PROGRAMMING V (Fortran)

4 lecture 2 lab 4 credits

Introduction to Fortran; number representation; Fortran notation; assignment statements; program control; I/O concepts; declarative statements; subroutines and subprograms; logical assignment statements.

491 ADVANCED DP CONCEPTS

3 lecture 0 lab 2 credits

Data communications networks; direct access files; minicomputers; current developments in the data processing field are researched and evaluated.

Administration, Staff, and Faculty

Administration

With its vast corporate resources and technological knowledge, Litton Industries continually develops complete echelons of management and administrative personnel. From these disciplined fields of business and science come the administrative staff of the Institute of Computer Management. Responsible education is their aim. Training, orienting, and preparing students to meet the challenges and opportunities of the expanding worlds of business and electronic data processing are their prime goals.

Each person on the administrative staff of ICM has a comprehensive background in business management, and in computer programming education along with a specialized knowledge of EDP equipment and related business machines.

Wayne R. Zanardelli

President

B.S., The Citadel

Alvaro H. Bunster

Controller

FCA., London, England

Robert P. Gioella

Director of Education

B.A., College of Steubenville

M.A., Duquesne University

Richard E. Elkin

Director of Admissions

Indiana State University

Staff

Albert Blank

Admission Representative

Western Reserve University

Joseph M. Budin

Admission Representative

M.A., Case Western Reserve University

David Dahler

H.S. Representative

B.S., Cleveland State University

Karen Dei Cas

Director of Public Relations

B.S., California State College

Herm Greene

Admission Representative

B.B.A., Western Reserve University

William Jones

Director of Placement

Findlay College

Carol C. Karr

Admission Representative

Cuyahoga Community College

Frederick Mathis

Admission Representative

Western Michigan

Providence Marzella

Admission Representative

Fenn College

Cheryl Zuppke

High School Representative

B.A., Kent State University

Faculty

The Institute of Computer Management maintains a highly qualified group of instructors to train students in the theoretical and practical aspects of computer and business training, and to instill in them understanding of the practical requirements of the business world.

Each instructor has been trained in formal data processing or business education and has had down-to-earth business experience so that the students are taught how their education is applied to the various aspects of business. ICM also maintains a continuing retraining program for its faculty to keep them constantly up-to-date with new innovations in their respective areas of specialization.

Faculty emphasis is on effective and personal instruction of the students. Faculty members are selected not only for their academic qualifications and experience in the business community, but also for their interest in assisting each student to develop his full potential.

George Boyle

Indiana University of Pa.

ICM School of Business

Joseph Brink

John Carroll University

Carol Eisenmann

M.A., Ohio State University

William P. Hanley

John Carroll University

Eric Johnson

B.S., Ohio State University

Lucinda Kampf

B.S., Ohio State University

Anthony Kascak

Pennsylvania State University

ICM School of Business

Larry McComb

Operations Manager

ICM School of Business

Harry L. McDaniel

B.S., Kent State University

Mark McLaughlin

Institute of Computer Management

Alexandria Pladys

Institute of Computer Management

William Ramsay

B.S., Hiram College

Charles Siemon

B.S., Allegheny College

Jeffrey W. Smith

B.S., Norwich University

Faculty, Part-Time

Linda Peltz

B.S., Cleveland State University

Michael S. Stager III

B.A., Cleveland State University

B.S., Dyke College



Institute of Computer Management

Diamond Shamrock Building

1100 Superior Avenue

Cleveland, OH 44114

(216) 241-3964